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TW

Docket No.: 614.1889

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of:

Kimikazu FURUKAWA et al.

Serial No.: 09/046,677

Group Art Unit: 2642

Confirmation No.: 2428

Filed: March 24, 1998

Examiner: H. Agdeppa

For: COMMUNICATION SUPPORT SYSTEM FOR PROVIDING SECURITY OF  
TELEPHONE SERVICES OF A DATA PROCESSING DEVICE FOR A TELEPHONE  
USER

**APPEAL BRIEF**

**Mail Stop Appeal Brief-Patents**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the final Office Action in the above identified application and pursuant to the Notice of Appeal filed January 21, 2005, Applicants submit this Brief and one copy with the requisite fee of \$500.00 set forth by 37 CFR §41.20(b)(2). A petition for a three-month extension of time and the required fee is concurrently filed herewith, thereby extending the period for filing this brief to June 21, 2005.

**I. REAL PARTY IN INTEREST**

The real party in interest in this appeal is the assignee, FUJITSU LIMITED.

**II. RELATED APPEALS AND INTERFERENCES**

The undersigned attorney, the appellant and the assignee know of no related appeals, interferences or other judicial proceedings which may be related to, directly affect, be directly affected by or have a bearing on the Board's decision in this appeal.

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**CERTIFICATE UNDER 37 CFR 1.8(a)**

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By: STAAS HALSEY  
Kevin P. Adams  
Date: 6-21-05

### **III. STATUS OF THE CLAIMS**

Claims 1-6, 8-13 and 15-20 are currently pending. Claims 7 and 14 have been cancelled. Claims 1-6, 8-13 and 15-20 stand finally rejected under 35 U.S.C. §103(a) and claims 1-6, 8-13 and 15-20 are appealed.

### **IV. STATUS OF AMENDMENTS**

A Response was filed December 20, 2004, in response to the Final Office Action mailed July 20, 2004, but no claim amendments were filed.

### **V. SUMMARY OF CLAIMED SUBJECT MATTER**

The present invention relates to a communication support system which is adapted to connect a telephone unit, through a communication control device, to a data processing device, and to connect a telephone network to the communication control device, when the user transmits a command signal from the telephone unit to the data processing device to obtain a computer-assisted telephone service from the data processing device.

In the communication support system of Fig. 1, it is possible for the telephone user to easily obtain a computer-assisted telephone service from the data processing device (DPD) 3 by transmitting a command signal from the telephone unit (TU) 1 to the communication control device (CCD) 2, regardless of whether a telephone call between the TU 1 and the telephone network (TN) 4 is in progress. See Fig. 1 and page 12, lines 11-14 of the Specification.

The command signal recognition unit 6 discretely detects a dual-tone multiple frequency (DTMF) command signal sent by the TU 1 and a DTMF command signal sent from the TN 4. The command signal recognition unit 6 determines whether the DTMF command signal is from the TU 1, the DTMF command signal from the TU 1 indicating one of a plurality of telephone services of the data processing device (DPD) 3. Page 11, lines 13-17 of the Specification.

Defined values related to a ten-key pad ("0"-"9", "#" and "\*") of the telephone unit are allocated to a plurality of DTMF command signals corresponding to the plurality of telephone services of the DPD. The defined values may be suitably selected from those that are not ordinarily used to indicate a telephone number of a destination terminal in the telephone network. The defined values used by the communication support system of the present invention include, for example, "\*\*1" through "\*\*4" and "\*\*7" through "\*\*9" as shown in Fig. 2. Fig. 2 and page 13, lines 6-12 of the Specification.

When power is not supplied to the CCD 2, the line switching unit 5 connects the TU 1 and the TN 4. When power is supplied to the CCD 2, the line switching unit 5 connects the TU 1

through the CCD 2 to the DPD 3 and disconnects the TN 4 from the CCD 2. At this time, the TU 1 is connected through the line switching unit 5 to the signal transmission inhibition unit 8. When the DTMF command signal from the TU 1 is detected, the command signal recognition unit 6 notifies the telephone service processing unit 7 of the DPD 3 that the DTMF command signal from the TU 1 is detected in the CCD 2. The telephone service processing unit 7 starts execution of a telephone service processing of the DPD 3 for the telephone service indicated by the DTMF command signal from the TU 1. See page 11, line 26 to page 12, line 10 of the Specification.

Therefore, the communication support system of the present invention provides adequate security of the telephone service of the DPD 3 for the telephone user, and can safely prevent erroneous execution of the telephone service processing of the DPD 3 as well as erroneous execution of another processing of a remote system in the TN 4. See page 12, lines 17-21 of the Specification.

#### **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

At issue is whether claims 1-6, 8-13 and 15-20 are patentable over Manning et al. (U.S. Patent No. 5,898,756) in view of Rosen et al. (U.S. Patent No. 5,864,607) and Amadasi et al. (U.S. Patent No. 3,569,634) and further in view of Bulfer (U.S. Patent No. 6,208,966).

A key subissue is whether the Examiner has established a *prima facie* case of obviousness, pursuant to MPEP 2143, by combining Manning et al. and Amadasi et al. More specifically, the issue is whether the Examiner's proposed modification renders the art unsatisfactory for its intended purpose, pursuant to MPEP 2143.01.

#### **VII. ARGUMENT**

In the final Office Action, the Examiner rejects claims 1-6, 8-13 and 15-20 for obviousness under 35 U.S.C. §103(a) as being unpatentable over Manning et al. in view of Rosen et al. and Amadasi et al. and further in view of Bulfer.

#### **References**

Manning et al.

Manning et al. (hereinafter "Manning") discloses a transmission-inhibiting device that inhibits the transmission of dialing signals over a telephone link. The device includes a detector 210 for identifying DTMF signals, and an AC load is provided to inhibit transmission by attenuation of the signals by at least 30 dB. Column 2, lines 7 to 12 and column 4, lines 33 to

37. This prevents DTMF command signals from being received by a central office, thereby allowing commands to be transmitted with the home telephone wiring. Such commands include invoking a speed/auto dialing function, providing an intercom, controlling appliances, etc. See the Abstract.

Amadasi et al.

Amadasi et al. (hereinafter "Amadasi") provides a circuit to prevent the use of a telephone apparatus, intended for internal calls or normal calls, for long distance calls without the apparatus subscriber's consent by counting pulses corresponding to a first numeral selected on the dial and a series switch connected to the telephone line and controlled by the counter to disconnect the unauthorized call. See column 1, lines 5-42.

The circuit in Amadasi detects whether the call being made is a prohibited long distance or taxed call and generates a signal, thereby activating a relay. In turn, the relay opens the switch connected to the telephone line, completely blocking the connection with the telephone network. See Fig. 2 and column 4, lines 6-11.

Rosen et al.

Rosen et al. (hereinafter "Rosen") discloses a computer system which communicates "between the PIU-connected telephones 104 and 108 and the computer system 100 ... through radio frequency (RF) communication between the PIUs 106 and 110 and the CIU 102 over the internal telephone network line 130. ... When a PIU-connected telephone is initially picked up, the PIU supplies power to the telephone instead of the phone company 134 and thus prevents the telephone from seizing the telephone network line 130. This effectively isolates the telephone from the external phone line 128, allowing the telephone to communicate with the CIU 102 by RF carrier signals sent over line 130. When the non-PIU telephone 114 is picked up, the CIU 102 turns off its carrier signal to force all telephones to revert to ordinary telephone operation." See column 4, line 58 to column 5, line 6.

Bulfer

Bulfer discloses a telecommunications network service for converting spoken words to DTMF signals. In Bulfer, a telephone user speaks a word representing a digit or letter. The service performs speech recognition of the word to identify the word and then generates the DTMF signal which corresponds to the spoken word. The DTMF signal is transmitted to an automated system to control the operation thereof. Column 2, lines 25 to 46.

**Group A: Claims 1, 3-6, 8-10, 12-13 and 15-20**

Claim 1 of the present invention recites, “a switch [is provided] ... to selectively open-circuit the telephone network from either of the telephone unit or the data processing device, and when the telephone network is open-circuited from either of the telephone unit or the data processing device, *completely blocks* transmission of the DTMF command signal from the telephone unit to the telephone network and allows transmission of the DTMF command signal directly to the data processing device when the DTMF command signal indicates one of the plurality of telephone services.” (emphasis added) Thus, the present invention of claim 1 ensures that the DTMF command signal, sent from the telephone unit, is not transmitted to the telephone network, since the transmission is completely blocked by the open circuit.

On the other hand, the system in Manning merely attenuates the DTMF signal to inhibit transmission of the signal.

On page 3 of the final Action, the Examiner recognizes that Manning fails to teach or suggest causing an open circuit between the telephone unit and the telephone network, thereby completely inhibiting transmission of the command signals from the telephone unit to the telephone network. Thus, the Examiner relies on Manning combined with Amadasi in asserting the obviousness of the recitations of claim 1.

To establish a *prima facie* case of obviousness, the following three criteria must be met: There must be some suggestion or motivation to combine the references; there must be a reasonable expectation of success; and the prior art references must teach or suggest all the claim limitations. MPEP 2143.

The Examiner has not shown that there is any suggestion or motivation to combine Manning and Amadasi.

By merely providing a switch to disconnect unauthorized long-distance calls, Amadasi does not teach or suggest a system that completely blocks transmission of the DTMF command signal from the telephone unit to the telephone network, by creating an open circuit, while allowing transmission of the DTMF command signal directly to the data processing device when the DTMF command signal indicates one of the plurality of telephone services, as recited in independent claim 1.

The purpose of the circuit in Amadasi is to completely block transmission of any signal

when a user attempts to make a prohibited call. Thus, in Amadasi, it would be impossible to allow transmission of the DTMF command signal to the data processing device, while inhibiting transmission of the DTMF signal from the telephone unit to the telephone network, as recited in claim 1.

According to MPEP 2143.01, the modification proposed in the Office Action cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984). Assuming, *arguendo*, that the teachings of Manning and Amadasi could be combined, the combination would teach a transmission-inhibiting device attenuating signals sent between telephones by disconnecting the telephone lines. It is not possible to attenuate the signals sent between telephones when the lines transmitting those signals are disconnected. Therefore, the combination of the cited references proposed by the Examiner would render each unsatisfactory for its intended purpose.

Furthermore, in the Advisory Action mailed January 21, 2005, the Examiner states that he uses Amadasi to show that "it was extremely old and well known to actually open-circuit a line when it was desirable for certain DTMF signals not to be sent to the telephony network." However, the Examiner provides does not support his assertion that open-circuiting a connection between a telephone unit and a telephone network, *while continuing to transmit the DTMF command signal to the data processing device*, is obvious by the combination of Manning and Amadasi. As argued above, combining Manning and Amadasi would render the transmission inhibiting device of Manning unsatisfactory for its intended use.

It is submitted that Rosen and Bulfer are silent as to any teaching or suggestion of "a signal transmission inhibition unit including a switch connected between the telephone network and either the telephone unit or the data processing device to switch therebetween ... and selectively open-circuit the telephone network from either of the telephone unit or the data processing device, and when the telephone network is open-circuited from either of the telephone unit or the data processing device, completely blocks transmission of the DTMF command signal and allows transmission of the DTMF command signal directly to the data processing device," as recited in claim 1. It is also noted that the Examiner does not rely upon these references as disclosing these features.

Therefore, since Manning and Amadasi are inappropriately combined in order to reject claim 1 for obviousness under 35 U.S.C. §103(a), it is respectfully submitted that claim 1 is patentable over the references.

Similarly to independent claim 1, independent claims 10 and 16-20 recite open-circuiting the telephone network from either the telephone unit or the data processing device, thereby completely blocking transmission of the DTMF command signal from the telephone unit to the telephone network and allowing transmission of the DTMF command signal directly to the data processing device. Thus, for at least the reasons presented above with respect to claim 1, it is submitted that independent claims 10 and 16-20 patentably distinguish over the prior art.

Dependent claims 3-6 and 8-9 depend from claim 1 and dependent claims 12-13 and 15 depend from claim 10. Claims 2-6, 8-9, 12-13 and 15 inherit the patentable limitations of their respective base claims and, thus, it is submitted that claims 2-6, 8-9, 12-13 and 15 patentably distinguish over the references.

#### **Group B: Claims 2 and 11**

Claims 2 and 11 recite a first converter unit that separates a data signal sent from the telephone network and a second converter unit that separates a data signal sent by the telephone unit, which are connected by a line including a switch that switches on or off to selectively connect or disconnect the telephone network from the telephone unit.

The Examiner, on page 7 of the final Action, states: "[I]t is inherent or would be very obvious to have a unit or two separate units, as the multiplication of units performing the same function has no inventive function, for the purpose of separating DTMF from voice signals as claimed in the present invention."

It is submitted that the two converter units recited in claims 2 and 11 are not merely performing the same function and, thus, have no inventive function. Since the telephone network and the telephone unit are connected individually to respective, different converter units, the DTMF generator unit 111 can connect to the telephone network 102, even when the switch is in the off position so that the telephone unit 101 and the telephone network 102 are disconnected. See Fig. 8, and page 18, lines 3-8 of the Specification.

None of the cited references teaches or suggests two different converter units respectively attached to the telephone network and the telephone unit, and connected by a connection line with a switch that switches on or off, thereby either connecting or disconnecting the telephone network and the telephone unit, as recited in claims 2 and 11.

Thus, for the reason set forth above, it is respectfully submitted that claims 2 and 11 patentably distinguish over the prior art.

### VIII. CONCLUSION

In summary, Applicants submit that claims 1-6, 8-13 and 15-20 patentably distinguish over the prior art. Accordingly, Applicants respectfully request reversal of the Examiner's rejections.

The Commissioner is authorized to charge any Appeal Brief fee or Petition for Extension of Time fee for underpayment, or credit any overpayment, to Deposit Account No. 19-3935.

Respectfully submitted,

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6-21-05



## **IX. CLAIMS APPENDIX**

1. A communication support system which is adapted to connect a telephone unit through a communication control device to a data processing device and adapted to connect a telephone network to the communication control device, the communication support system comprising:

a command signal recognition unit either detecting a Dual Tone MultiFrequency (DTMF) command signal sent from the telephone unit or a network DTMF command signal sent from the telephone network, and determining, when the DTMF command signal is from the telephone unit, which one of a plurality of telephone services of the data processing device the DTMF command signal from the telephone unit indicates, wherein the command signal recognition unit includes a DTMF detection unit that detects the network DTMF signal sent from the telephone network, the DTMF command signal from the telephone unit having a predetermined value different from a value of the network DTMF signal;

a signal transmission inhibition unit including a switch connected between the telephone network and either the telephone unit or the data processing device to switch therebetween so as to selectively open-circuit the telephone network from either of the telephone unit or the data processing device, and when the telephone network is open-circuited from either of the telephone unit or the data processing device, completely blocks transmission of the DTMF command signal from the telephone unit to the telephone network and allows transmission of the DTMF command signal directly to the data processing device when the DTMF command signal indicates one of the plurality of telephone services; and

a telephone service processing unit that performs a telephone service processing of the data processing device for the telephone service indicated by the DTMF command signal from the telephone unit, the telephone service processing unit starting execution of the telephone service processing when the command signal recognition unit determines that the DTMF command signal is from the telephone unit.

2. The communication support system according to claim 1, wherein the signal transmission inhibition unit comprises:

a first converter unit that separates a data signal sent from the telephone network into a dual-tone multiple frequency signal and a voice signal;

a second converter unit that separates a data signal sent by the telephone unit into a dual-tone multiple frequency signal and a voice signal; and

the switch, provided on a connection line of the first converter unit and the second converter unit that switches on or off the connection line to selectively provide one of connection of the telephone unit and the telephone network through the switch and disconnection of the telephone network from the telephone unit.

3. The communication support system according to claim 1, wherein the command signal recognition unit detects a dual-tone multiple frequency DTMF signal sent by the telephone unit, the command signal recognition unit determining that the command signal is from the telephone unit when said DTMF signal indicates one of a plurality of defined values allocated to the plurality of telephone services.

4. The communication support system according to claim 3, wherein the command signal recognition unit detects a dual-tone multiple frequency DTMF signal sent from the telephone network, the command signal recognition unit distinguishing between the DTMF signal from the telephone network and the DTMF signal from the telephone unit.

5. The communication support system according to claim 3, wherein the telephone service processing unit performs a telephone service processing of the data processing device for the telephone service indicated by the DTMF signal from the telephone unit.

6. The communication support system according to claim 1, wherein the communication control device comprises a line switching unit that selectively provides one of connection of the telephone unit and the telephone network through the line switching unit and disconnection of the telephone network from the telephone unit.

8. The communication support system according to claim 1, wherein the communication control device comprises a DTMF generator unit that generates a dual-tone multiple frequency DTMF signal based on the DTMF signal sent by the telephone unit, the DTMF generator unit transmitting the DTMF signal from the communication control device to the

telephone network before the transmission of a signal from the telephone unit to the telephone network is inhibited by the signal transmission inhibition unit.

9. The communication support system according to claim 1, wherein the telephone service processing unit performs one of a voice recording processing, a voice playback processing, a file transmission processing and a telephone number entry processing based on the telephone service indicated by the command signal from the command signal recognition unit.

10. A communication control device adapted to connect a telephone unit and a data processing device through the communication control device and adapted to connect a telephone network to the communication control device, comprising:

a line switching unit alternately providing either connection of the telephone unit and the telephone network through the line switching unit or disconnection of the telephone network from the telephone unit;

a command signal recognition unit that detects either a Dual Tone Multi-Frequency (DTMF) command signal sent from the telephone unit or a network DTMF command signal sent from the telephone network, and determines whether the DTMF command signal is from the telephone unit, when the DTMF command signal from the telephone unit indicates one of a plurality of telephone services of the data processing device, wherein the command signal recognition unit includes a DTMF detection unit that detects the network DTMF signal sent from the telephone network, the DTMF command signal from the telephone unit having a predetermined value different from a value of the network DTMF signal; and

a signal transmission inhibition unit including a switch connected between the telephone network and either the telephone unit or the data processing device to switch therebetween so as to open circuit the telephone network from either of the telephone unit or the data processing device, and when the telephone network is open-circuited from either of the telephone unit or the data processing device, completely blocks transmission of the DTMF command signal from the telephone unit to the telephone network and allows transmission of the DTMF command signal directly to the data processing device when the DTMF command signal from the telephone unit indicates one of the plurality of telephone services.

11. The communication control device according to claim 10, wherein the signal transmission inhibition unit comprises:

a first converter unit that separates a data signal sent from the telephone network into a dual-tone multiple frequency signal and a voice signal;

a second converter unit that separates a data signal sent by the telephone unit into a dual-tone multiple frequency signal and a voice signal; and

the switch provided on a connection line of the first converter unit and the second converter unit that switches on or off the connection line to selectively provide one of connection of the telephone unit and the telephone network through the switch and disconnection of the telephone network from the telephone unit.

12. The communication control device according to claim 10, wherein the command signal recognition unit detects a dual-tone multiple frequency DTMF signal sent by the telephone unit, the command signal recognition unit determining that the command signal from the telephone unit is detected when said DTMF signal indicates one of a plurality of defined values allocated to the plurality of telephone services.

13. The communication control device according to claim 12, wherein the command signal recognition unit detects a dual-tone multiple frequency DTMF signal sent from the telephone network, the command signal recognition unit distinguishing between the DTMF signal from the telephone network and the DTMF signal from the telephone unit.

15. The communication control device according to claim 10, further comprising a DTMF generator unit that generates a dual-tone multiple frequency DTMF signal based on the DTMF signal sent by the telephone unit, the DTMF generator unit transmitting the DTMF signal to the telephone network before the transmission of a signal from the telephone unit to the telephone network is inhibited by the signal transmission inhibition unit.

16. A telephone service processing method in a communication support system which is adapted to connect a telephone unit through a communication control device to a data processing device and adapted to connect a telephone network to the communication control device, the method comprising:

either detecting a Dual Tone Multi-Frequency (DTMF) command signal sent by the telephone unit or a network DTMF command signal sent from the telephone network, wherein the DTMF command signal from the telephone unit has a predetermined value different from a value of the network DTMF signal;

detecting, when the DTMF command signal is from the telephone unit, the DTMF command signal indicating one of a plurality of telephone services of the data processing device;

selectively open-circuiting the telephone network from either of the telephone unit or the data processing device, and when the telephone network is open-circuited from either of the telephone unit or the data processing device, completely blocking transmission of the DTMF command signal from the telephone unit to the telephone network and allowing transmission of the DTMF command signal directly to the data processing device when the DTMF command signal indicates one of the plurality of telephone services by switching the telephone network between either the telephone unit or the data processing device; and

starting execution of a telephone service processing using the data processing device for the telephone service indicated by the command signal from the telephone unit when it is determined in said determining step that the command signal is from the telephone unit.

17. A computer readable medium storing program code causing a processor to perform a method executing a telephone service in a communication support system which is adapted to connect a telephone unit through a communication control device to a data processing device and adapted to connect a telephone network to the communication control device, said method comprising:

detecting either a Dual Tone Multi-Frequency (DTMF) command signal sent by the telephone unit or a network DTMF command signal sent from the telephone network, wherein the DTMF command signal from the telephone unit has a predetermined value different from a value of the network DTMF signal;

determining whether the DTMF command signal is from the telephone unit, the DTMF command signal is from the telephone unit, the DTMF command signal from the telephone unit indicating one of a plurality of telephone services of the data processing device;

selectively open-circuiting the telephone network from either of the telephone unit or the data processing device, and when the telephone network is open-circuited from either of the telephone unit or the data processing device, completely blocking transmission of the DTMF command signal from the telephone unit to the telephone network and allowing transmission of the DTMF command signal directly to the data processing device when the DTMF command signal from the telephone unit indicates one of the plurality of telephone services by switching the telephone network between either the telephone unit or the data processing device; and

starting execution of a telephone service processing of the data processing device for the telephone service indicated by the command signal from the telephone unit when it is determined by the determining that the command signal is from the telephone unit.

18. A communication support system which is adapted to connect a telephone unit through a control device to a processing device and adapted to connect a telephone network to the control device, comprising:

a recognition unit either detecting a Dual Tone MultiFrequency (DTMF) signal sent from the telephone unit or a network DTMF signal sent from the telephone network, and comprising

a DTMF detection unit to detect the network DTMF signal, the DTMF signal from the telephone unit having a predetermined value different from a value of the network DTMF signal, and a disconnection unit including a switch connected between the telephone network and either the telephone unit or the processing device to switch therebetween so as to selectively open-circuit the telephone network from either of the telephone unit or the processing device, and when the telephone network is open-circuited from either of the telephone unit or the data processing device, completely blocks transmission of the DTMF signal from the telephone unit to the telephone network and allows transmission of the DTMF signal directly to the processing device when the DTMF signal is from the telephone unit.

19. A processing method in a communication support system which is adapted to connect a telephone unit through a control device to a processing device and adapted to connect a telephone network to the control device, comprising:

detecting either a Dual Tone Multi-Frequency (DTMF) signal sent by the telephone unit or a network DTMF signal sent from the telephone network, wherein the DTMF signal from the telephone unit has a predetermined value different from a value of the network DTMF signal;

determining whether the DTMF signal is from the telephone unit; and

selectively open-circuiting the telephone network from either of the telephone unit or the data processing device, and when the telephone network is open-circuited from either of the telephone unit or the data processing device, completely blocking transmission of the DTMF signal from the telephone unit to the telephone network and allowing the transmission of the DTMF signal directly to the processing device when the DTMF signal is from the telephone unit by switching the telephone network between either the telephone unit or the processing device.

20. A computer readable medium storing program code causing a processor to perform a method in a communication support system to connect a telephone unit through a control device to a processing device and to connect a telephone network to the control device, the method comprising:

either detecting a Dual Tone Multi-Frequency (DTMF) signal sent by the telephone unit or a network DTMF signal sent from the telephone network, wherein the DTMF signal from the telephone unit has a predetermined value different from a value of the network DTMF signal;

determining whether the DTMF signal is from the telephone unit; and

selectively open-circuiting the telephone network from either of the telephone unit or the data processing device, and when the telephone network is open-circuited from either of the telephone unit or the data processing device, completely blocking transmission of the DTMF signal from the telephone unit to the telephone network and allowing the transmission of the DTMF signal directly to the processing device when the DTMF signal is from the telephone unit by switching the telephone network between either the telephone unit or the processing device.